



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

and marls, with occasional conglomerates; they are most folded and most eroded near the mountains, where subsequent valleys are developed along certain anticlinal axes; they are less folded and eroded near the coast, where structural arches and troughs are still expressed in the topography although the arches are well dissected by consequent streams and are cut across in antecedent fashion by the large rivers from the interior. The folded structure has been carefully studied, as some of these strata bear petroleum. Occasional hard beds form cuestas and ridges, but the strata are usually so weak as not to exhibit their folded structure in their surface forms. Here the soils creep and slide so readily down the slopes, especially in cleared districts and at times of heavy rains, that many valley floors are unevenly aggraded and converted into morasses, in which the streams are broken up and confused with the ground water; such valley floors are used for rice culture. The larger valleys, in the mountains as well as in the surrounding hilly belt, exhibit along most of their length the effects of intermittent upheaval in well-defined but discontinuous terraces at two levels; the higher one from 90 to 120 meters, the lower one from 30 to 50 meters, over the rivers. Corresponding wave-cut terraces and wave-built beaches, associated with coral-reef patches and shell deposits, are seen along the outer slope of the hilly belt at heights of 100 and of 40 meters: the coral-reef patches grow up from gravel beds. Low terraces in the main valleys are attributed not to a revival of erosion in consequence of recent uplift but to river floods, although some of the rivers are still deepening their beds. The low coastal plain is from 3 to 30 kilometers wide and from 10 to 15 meters above sea level at its inner border; it is here and there extended by the growing deltas of the larger rivers and by the growing marshes of lagoons enclosed by offshore sand reefs.

Volcanic activity, long continued, has intermittently and unsystematically superposed various features upon the forms above described. Several great cones have been formed in the different areas; one of the largest, Geureudong, is a complex mass which rises over the interior mountains inland from the mid-length of the northern coast; it is broadly truncated at an altitude of 3,260 meters (as if it contained an extensive crater); one of its lateral cones bars the upper course of a river and thus forms Laut Tawar lake, formerly larger than now, but still some 25 kilometers in length. A similar lake in another valley, now drained, is recorded in shore terraces and deltas. Extensive mudflows of volcanic agglomerates and tuffs, from 10 to 50 kilometers in length, bury parts of the hilly belt or flood its valleys, thus more or less completely extinguishing its relief; but these flows are now dissected by narrow, steep-walled ravines with cascading streams. One of the volcanic cones forms the island of We, about 10 kilometers in diameter and 730 meters in height, near the north-western extremity of Atjeh; it is described in a special article by Zwierzycki (*Jaarboek van het Mijneven*, Vol. 45, 1916, pp. 1-11) as of well-dissected form, bearing three wave-cut benches, at 20, 40, and over 100 meters above sea level; the middle bench is the most distinct; it girdles the island and sometimes has a width of 150 meters. Remains of "coral banks" are found on each bench.

The photographic illustrations of the essay on Atjeh are fair; the outline figures in the text might be much better. The physiographic analysis bears every mark of accuracy; but, as it is the work of geologists, it is naturally given a geological phrasing which is avoided as far as possible in the above abstract.

W. M. DAVIS

#### CLIMATE AND WEATHER OF THE PHILIPPINES

JOSÉ CORONAS. **The Climate and Weather of the Philippines, 1903 to 1918.** 195 pp.; maps, diags. The Government of the Philippine Islands, Philippine Census, A. D. 1918. Bureau of Printing, Manila, 1920. 9 x 6 inches.

Several important studies of the climate of the Philippines have been issued during the past two decades. An extended discussion entitled "Climatología de Filipinas" (1899) was published as a part of "El Archipiélago Filipino," printed in Washington at the expense of the United States Government. An English translation appeared in Volume 4 of the Report of the First Philippine Commission to the President (1901, pp. 113-357). A summary was published in 1900 under the title "Interesting Climatological Data Concerning the Weather of Manila." To the 1903 Census of the Philippines, Rev. José Algué, S.J., Director of the Weather Bureau, contributed another report on climate, which included many of the illustrations and tables of the monograph embodied in "El Archipiélago Filipino," but revised to date. To Father Algué we are also indebted for two pamphlets on the climate of Baguio (1902, 1909). The rainfall has been discussed by Rev. Miguel Saderra

Masó, in "The Rainfall in Philippines" (1907) and "Annual Amount and Distribution of Rainfall in the Philippines" (1914). In 1915, as a contribution to the Panama Pacific International Exposition, Rev. José Algué issued a pamphlet showing, on a map, three types of climate based on the monthly distribution of the rainfall and considered the characteristics of each type.

The present monograph is a new and original study, prepared for the Philippine Census of 1918. It is not only remarkably complete in all details, including many which are often omitted in climatic discussions, but it also lays special emphasis upon the weather conditions. Climate being average weather, a knowledge of the weather types which, taken together, go to make up any climate, seems to us absolutely essential. In climatological progress of the last decade, one of the most marked tendencies has been the increasing emphasis laid upon the weather element, with the result that recent studies have given far more complete, vivid, accurate, and withal interesting pictures of the climates with which they deal than was formerly the case.

This Report presents more data and deals with more stations than any previously published on the climate of the Philippines. Special emphasis is laid on rainfall, which is the most critical element of the climate in a region whose temperatures do not vary widely. The types of monthly distribution of rainfall are shown by means of a series of curves, and an interesting "climate map" indicates, by colors, the two main and the two intermediate types of rain distribution. On this map a novel and ingenious method of showing the annual amounts of rainfall is employed. These amounts are entered, for each station, in very legible figures, in color according to the amounts, the four colors used indicating rainfalls of under 1,500 mms., 1,500-2,000 mms., 2,000-3,000 mms., and over 3,000 mms. The resulting map presents the facts of annual rainfall and of rainfall types in a singularly clear and effective manner. On a somewhat similar scheme, the essential temperatures are shown. At each station there are three sets of figures, printed in a column. The first is the mean annual minimum; the second (in red) the annual normal; and the third the mean annual maximum. This map shows the temperatures very simply and clearly.

The typhoons which affected the islands during the period of 16 years are distributed by provinces and subprovinces, the tracks of remarkable typhoons being plotted. Accounts are given of all the principal floods and periods of drought experienced during the period. A page of curves of monthly mean temperatures for selected stations in Europe, the United States, and the Far East illustrates the steadiness and small ranges of the temperature in the islands. Several wind roses show the seasonal changes in wind direction, and bring out clearly the monsoon tendencies.

This new and interesting report will be welcomed as one of the important publications on climatology of the last dozen years. We commend it as a model of what a climatographic discussion should aim to be.

R. DE C. WARD

#### AN ETHNOGRAPHIC HANDBOOK ON THE PHILIPPINES

A. L. KROEBER. **Peoples of the Philippines.** 224 pp.; maps, ill., bibliogr., index. (Amer. Museum of Nat. Hist. Handbook Ser. No. 8.) New York, 1919. 8 x 5½ inches.

This volume of the admirable Handbook Series of the American Museum is the fourth dealing with primitive races. The first three treated of restricted culture areas in North America, while the present volume deals with an area of entirely different character.

As the introduction points out, the Philippines present a field of exceptional interest to the student of the development of social culture inasmuch as they preserve a remarkable "stratification" of civilizations. The most recent "layer" includes the religious and cultural features of the Christian epoch dating from the Spanish conquest of the Islands in the later sixteenth century. Mohammedanism came two centuries earlier and still maintains its sway in the southernmost parts of the island group. More profound are the influences material and spiritual that, emanating from India, spread throughout the East Indies and probably reached the Philippines mainly by native channels of transmission. Contemporaneously there were relations with southern China, apparently on the material side alone. "There is not a single institution, piece of knowledge, or religious belief current in the Philippines that can be derived with any certainty from China." Below these is the stratum of primitive Malayan culture, and there are remnants of the still earlier culture known as Negrito.

Dr. Kroeber gives an illuminating exposition of the principal facts regarding the native